

**System Configuration Team (SCT)  
Reasonable & Prudent Measure #26  
Meeting Notes  
February 18, 1998**

**I. Greetings and Introductions.**

The February 18 meeting of the System Configuration Team was held at the National Marine Fisheries Service's offices in Portland, Oregon. The meeting was co-chaired by Bill Hevlin of NMFS and Jim Ruff of the Northwest Power Planning Council staff. The agenda and a list of attendees for the January 21 meeting are attached as Enclosures A and B.

The following is a distillation (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items. Please note that some enclosures referenced may be too lengthy to routinely include with the meeting notes; copies of all enclosures referred to in the minutes are available upon request from Kathy Ceballos of NMFS at 503/230-5420.

**II. Progress Update on the Development of the Five-Year Gas Abatement Plan for WDOE.**

Mark Schneider of NMFS, co-chair of the DGT, distributed Enclosure C, the draft "Request to the Washington Department of Ecology for Approval to Spill Water at Mainstem Lower Snake and Lower Columbia River Hydroelectric Projects." I'm handing this out today, Schneider said, because several participants at the last DGT meeting requested an opportunity to review it before it is submitted to WDOE; my plan is to contact those participants directly and solicit their comments. He asked that any other comments on this document be submitted to him as soon as possible -- no later than Friday, February 27. I will incorporate those comments, said Schneider, and produce a final document, for inclusion in the package to be submitted to WDOE by March 1.

**III. Presentation on Grand Coulee Dam Gas Abatement Alternatives.**

Kathleen Frizell of the Bureau of Reclamation briefed the SCT on the status Reclamation's efforts to develop structural gas abatement alternatives at Grand Coulee Dam. She distributed Enclosure D, a lengthy Preliminary Concepts Report on this subject, dated

February 1998 (available on request from Kathy Ceballos of NMFS), then went through a series of overheads, summarizing the background and goals of this effort, design parameters, target TDG levels and the eight alternatives currently under consideration:

- 1. Reactivate the project's low-level outlet works
- 2. Extend and cover the project's mid-level outlet works
- 3. Pipe through forebay dam
- 4. Add outlet works deflectors for 10 and 40 conduits
- 5. Forebay cascade
- 6. Enclosed stilling basin
- 7. Widen river with labyrinth weir and gate
- 8. Side channel canal with drop to river

These overheads are attached as Enclosure E; please see this document for details of Frizell's presentation. The briefing included the following summary of the (extremely preliminary) expected TDG benefits, cost and power loss associated with each alternative:

<b>Alternative</b>	<b>Expected Combined TDG (%)</b>	<b>Cost (millions)</b>	<b>Construction Power Loss</b>	<b>Lifetime Power Loss</b>
Alternative 1	120	99	YES	NO
Alternative 2	120	24	NO	NO
Alternative 3	120	270	YES	NO
Alternative 4a (add 10 o.w. deflectors)	121.2 - 123.6	15.5	NO	NO
Alternative 4b (add 40 o.w. deflectors)	120 - 121.7	135	NO	NO
Alternative 5	117.6 - 119	340	YES	NO
Alternative 6	117.6 - 118	145	YES	YES
Alternative 7	110 - 116	460	YES	YES
Alternative 8	115.2 - 118	550	YES	YES

My goal today, said Frizell, is to bring you up to speed on where Reclamation is in the gas abatement alternatives evaluation process at Grand Coulee, and to seek SCT input on which alternatives may have enough merit to carry forward to a concept-level study, to be completed by the end of FY'98.

Frizell summarized her presentation as follows:

- The goal is to complete a feasibility-level report which evaluates structural alternatives

- for gas management by the end of FY'00.
- These are only preliminary ideas, including basic analyses and costs, for abating total dissolved gas at Grand Coulee. There is no buy-in, at this point, on any of the eight alternatives from USBR as an agency.
- USBR is prepared to carry up to six alternatives through concept-level investigation in FY'98. Reclamation is looking for SCT input on which alternatives merit further investigation.

Ron Boyce of ODFW said it would be appropriate for Reclamation to ensure that the state and federal fishery and water quality agencies, as well as the tribes, have an opportunity to provide input at every upcoming step in the Grand Coulee gas abatement evaluation process. That is certainly our intent, Frizell replied.

The group debated how best to develop an SCT technical review of these structural alternatives, as well as an SCT recommendation on which alternatives should be carried through the concept-level analysis. In response to a question, Frizell requested that the comment process be completed by mid-March. After a few minutes of discussion, it was agreed that the SCT participants will submit their individual agency comments on the Bureau's structural gas abatement alternatives to Hevlin or Ruff by March 13; we will then put this item on the agenda for further discussion at the March 19 SCT meeting, Ruff said. It was further observed that the water quality agencies will be seeking a face-to-face meeting with Reclamation to discuss gas abatement at Grand Coulee.

Other meeting participants expressed an interest in exploring short-term operational measures to reduce TDG at Grand Coulee while the long-term structural fixes are being developed; it was observed that operational changes at Grand Coulee could affect operations at a number of other projects in the system, and should probably be a part of a more comprehensive, systemwide planning effort. The point is that, when the region actually comes to grips with the decisions involved in making large investments in structural TDG fixes at the dams, that system analysis will need to be done in order for the region to make informed choices, said Witt Anderson of the Corps. However, that's separate from this technical review of the specific structural alternatives Reclamation has developed, said Hevlin -- we certainly don't want the Bureau to stop work on analyzing these alternatives until that system analysis can be undertaken.

Frizell further observed that, while Reclamation has budgeted for a conceptual-level investigation of up to six Grand Coulee gas abatement alternatives in FY'98, if the list could be narrowed to only three or four alternatives, that would allow the Bureau to accelerate the conceptual-level analysis and, possibly, make a start on a feasibility-level investigation in FY'98. This systemwide analysis question aside, she said, we would like to get the structural modification information on the table as soon as possible, to help inform the regional debate on gas abatement.

Monte McClendon made the suggestion that the June SCT meeting be held at Grand Coulee, to allow an opportunity for an SCT tour of Grand Coulee and Chief Joseph Dams, to observe first-hand the physical constraints that have to be taken into account at that project. It was further agreed to invite any interested Dissolved Gas Team members to attend this meeting.

#### **IV. Discussion of Alternatives for Chief Joseph Dam Gas Abatement.**

Marian Valentine of the Corps' Seattle District briefed the SCT on TDG reduction efforts at Chief Joseph Dam, beginning with a physical and operational overview of the project, the somewhat unique TDG monitoring situation there and some of the operational alternatives that may help reduce TDG at that project over the short term. Valentine's presentation is summarized in Enclosure F; please see this document for details.

So far, said Valentine, the following potential solutions have been identified:

- Physical model studies have been completed for flow diverters on the Chief Joseph spillway; these were claimed to be effective up to a 10-year flood with 18 power units operating.
- Explore the possibility of larger forebay fluctuations in Chief Joseph's reservoir, such that it can better act as a re-regulation dam for Grand Coulee.
- Improve dissolved gas spill ability at low head projects in the river and shift generation to Grand Coulee and Chief Joseph.
- Generate instead of spill at night by giving incentives to the Direct Service Industries to operate at night (DSIs account for about 30% of BPA generation).
- Get rid of most spring spill by discontinuing the practice of spilling to get down to the flood control rule curves. In particular, this makes sense at high head projects that entrain less gas over the spillway than through the low elevation outlets. Re-examine the philosophy of "spill now to prevent spill later."

Are you investigating any structural alternatives beyond the spillway flow diverters? Ruff asked. We don't have any funds at Chief Joseph to investigate structural TDG fixes at Chief Joseph, Valentine replied. In response to a question from Mary Lou Soscia, Valentine said flow deflectors were designed for the project during the 1981 pool raise; in the end, they were deemed infeasible and not necessary because of the additional generating units that had been added to the project. The design is still applicable structurally, although flip-lip technology has improved in the 17 years since the design was completed, she added. Has there been any discussion about revisiting flip-lips as a measure for abating gas at Chief Joseph? Soscia asked. We've talked about it at SCT, said Anderson. First, however, we need to identify the problem – the frequency of spill at the project. Then we need to know where this fits into the system operations analysis before we decide to invest \$20 million or \$30 million in flow deflectors that may or may not be used at Chief Joseph. Funding is a real issue at this project, because Chief Joseph is not included in the scope of the Columbia River Fish Mitigation program, Anderson said. It may be possible to find some O & M funding to study the problem; depending on the feedback we get here, if it's something people feel we need to do, the Corps can have some internal discussions about how to make that happen. The bottom line is, flow deflectors have been designed for Chief Joseph and are currently on the shelf – getting them built is a matter of demonstrating that that would be a sound investment.

What would it take to get the Corps to investigate the possibility of using O & M funds to initiate gas abatement studies at Chief Joseph? Boyce asked. Probably some feedback from the

SCT that that is something that is very important, from your perspective, Anderson replied.

At some point, said Ruff, we need to have a policy discussion about what the objectives are, systemwide – until that discussion occurs, it's hard for us to decide, at the technical level, what we need to do to abate gas. That gets back to the system studies issue – do you treat Chief Joseph and Grand Coulee as a single unit, or as a part of the system as a whole? I don't know which forum would be most appropriate for that discussion – possibly the Executive Committee or the Council – but it's not the SCT, Ruff said. All I know is, there are a lot of larger questions involved when you really start to delve into it, he said.

In terms of next steps, Ruff said that, from his perspective, there does appear to be an interest in further investigation of gas abatement at Chief Joseph – it's hard to let Chief Joseph off the hook if we're pressing Grand Coulee and the other federal projects to do something, he said. Some minutes of additional discussion yielded an SCT assignment to the Corps to expand the information presented by Valentine today into a proposal and strategy for studying gas abatement at Chief Joseph. We'll go back and look at how we might fund Seattle District to do a study plan, at least for an initial step, Anderson said -- I'll take that up with Corps management and report back at the March SCT meeting. In response to a question, he added that it may be possible to make a start on this work in FY'98, if O & M funds are available.

## **V. Gas Abatement Plans at the Mid-Columbia Dams.**

At Wells Dam, there has been a TDG monitor in the forebay for the past several years, Hevlin said; in 1997, a monitor was installed in the tailrace as well. What the tailrace monitor found was that spilling 5%-7% of total flow through the bypass spill program at Wells adds 1%-2% TDG to the load already coming from the forebay. The project will collect more information about gas characteristics at Wells in 1998, Hevlin said.

At Rocky Reach Dam, said Robert McDonald of Chelan PUD, in developing our portion of the gas abatement plan, I have concentrated primarily on spill for fish passage. We tested the effectiveness of fish spill at Rocky Reach in 1983, and again in 1997; we found that we get less than 1% of the fish for each percent of flow that we spill. As many of you are aware, we are currently negotiating the terms of a Habitat Conservation Plan, which contains survival goals, McDonald said; spill is not a long term fish bypass option, in the terms of the HCP – we're focusing on reaching our survival goals through other measures, such as the turbine bypass system. We are also looking to reduce turbine mortality through the installation of fish-friendly turbines, and we believe there are some things we could be doing operationally as well. However, until the HCP is signed and we achieve the goals it contains, we have some spill for interim fish protection – 15% in the spring and 10% in the summer.

We have only been monitoring tailrace TDG levels at Rocky Reach since 1996, McDonald continued, and the dynamics of TDG below Rocky Reach aren't well understood at this point. In 1996, tailrace TDG levels were higher than forebay levels; in 1997, tailrace TDG levels were lower than forebay levels. One change in 1997 was the fact that spill for fish passage was spread across the entire powerhouse at Rocky Reach, rather than being concentrated in two to four spill bays, as was the case in 1996. It didn't pass fish any better than the concentrated spill, but it looks as though that spill pattern may abate gas, McDonald said. These results are

very preliminary; while they are promising, they are certainly not conclusive.

At this time, we are not proposing any structural fixes at Rocky Reach, he continued. We are proposing some actions, such as a separate entrance to the surface collector, as well as more intake screens. We will further evaluate the TDG dynamics under spread spill in 1998; if we find that spread spill abates gas at all forebay levels, we will request that the project be bumped up on the spill priority list for replacement spill, McDonald said. Once turbine rehab is completed at the project, we will try to minimize forced spill at all times by scheduling unit outages outside the high flow periods.

Downstream, at Rock Island, the picture is quite different, McDonald said. We have found that spill at Rock Island is a highly effective means of passing fish, and have constructed and modified nine spill gates to provide low-volume surface spill. We hope to be able to do a hydroacoustic evaluation of the effectiveness of spill through only the low-volume gates at Rock Island in 1998, he added. These notched gates allow us to provide spill at more locations at the project than we would if we were spilling through full gates, while using only about a quarter of the water volume -- 2.5 Kcfs per gate vs. 10 Kcfs, McDonald explained. But you're still producing gas with the notched gates? Ruff asked. It looks like we may be, McDonald replied.

With this in mind, we have already begun a modeling program for gas abatement structures at Rock Island Dam, McDonald continued. In 1998, we will be looking mainly at a ski jump-type spreader, in an effort to spread the spill out further. In 1999, if it's still considered necessary and if we have found a feasible option, we will build and test a gas abatement prototype. If that test is successful, and it looks like the prototype does abate gas, in 2000, we will test to see how fish-safe it is, so that we're not killing fish, McDonald said. If that test is successful, in 2001, we will start installing the gas abatement structure. If design flaws are identified, of course, we'll have to go back to the drawing board.

So you will be giving WDOE a gas abatement plan of action just like we're developing for the Corps projects? Hevlin asked. That's correct, McDonald replied.

Moving on, Hevlin said Grant PUD is developing a second prototype flip-lip for Wanapum Dam; the first one performed pretty well, he said, but it apparently started to erode, and they have designed a second prototype with a little more slope, which they feel will not only take care of the erosion problem, but which should also abate gas a bit more effectively. Grant will probably construct that after the spring migration, to avoid having to shut down any spillways, he explained. After that, NMFS expects Grant to install flow deflectors across the Wanapum spillway, Hevlin said, prior to the 1999 migration season.

At Priest Rapids, it appears that project has similar degassing characteristics to what we've seen at The Dalles, Hevlin continued; for that reason, there are no current gas abatement plans at Priest Rapids.

## **VI. Gas Abatement at Dams Above Grand Coulee.**

We have opened up a dialogue with the Canadian projects about gas production above

Grand Coulee, said Jack Gackstatter of EPA. Initial response has been encouraging; the Canadians are initiating the installation of additional monitoring stations below the Pend Oreille system, Keenleyside and at the international boundary, this spring. There has also been some discussion of studying potential gas abatement alternatives. I don't have a lot of specifics to report at this time, Gackstatter said; however, the Canadians are certainly aware of our concerns about dissolved gas, and we will be continuing our discussions with them.

Ruff added that a workshop – “Toward Ecosystem-Based Management in the Upper Columbia River Basin” – is being planned for April 27-30 in Castlegar, British Columbia (the workshop information guide is available as Enclosure G). I know that some of these water quality issues will be addressed during technical sessions at that workshop, Ruff said, which should open up the trans-boundary discussion of fish and wildlife and water quality even further.

Have they done anything to date to abate total dissolved gas, either structurally or operationally, at any of the Canadian dams? Boyce asked. Not to my knowledge, Gackstatter replied.

## **VII. Discussion of Ice Harbor Dam End-Bay Flow Deflector, Training Wall Extension and Coffe Cells for Navigation.**

Hevlin distributed Enclosure H, a letter from NMFS's Mark Schneider concerning the planned construction of the Ice Harbor end-bay deflector, training wall extension and coffe cells. NMFS' Steve Rainey went through the contents of this letter; please see Enclosure H for details. Basically, what we're proposing is that, now that we have eight flow deflectors installed at Ice Harbor, we wait to see what kind of gas performance we get in 1998, and what incremental benefit we can expect from the end-bay deflectors, Rainey said. We would like to be sure that there are sufficient gas and fish benefits associated with this project before we go forward with an expenditure of \$3.3 million.

COE's Rick Emmert updated the SCT on the current status of the work at Ice Harbor, explaining that the Corps is in the process of finalizing a report containing its recommendations; we have also begun to prepare contract documents for the construction of these features, he said. The report is now about 75% complete, and should be available for review in March; basically, it recommends the construction of flow deflectors on Bays 1 and 10 at Ice Harbor, as well as the extension of the training wall between Bays 9 and 10, to minimize the eddy and associated adult and juvenile passage problems caused by the operation of flow deflectors on the other bays. To correct the navigation problem, the Corps is recommending the construction of four coffe cells, to be installed below the existing navigation lock guide wall.

COE's Martin Ahmann added some additional details about the effects of these proposed activities, saying, among other things, that the two end-bay flow deflectors are expected to provide a further 2% to 4% in TDG reduction at Ice Harbor. With the installation of those two additional deflectors, the Corps expects that it will be possible to increase the 120% TDG cap at that project from 50 Kcfs to about 75 Kcfs, a 50% increase. Most important, we expect these flow deflectors to greatly reduce TDG in the vicinity of the fishway, he said.

Ahmann also touched on some of the results from the Corps' near-field TDG investigations at the Snake River projects; for example, at Lower Monumental, a flow of 3.4 Kcfs per bay over bays equipped with flip-lips produced near-field TDG levels of about 125%. TDG levels dropped to 115%-118% by about 1,000 feet downstream of the project, he added. At 5.1 Kcfs per bay, without deflectors, near-field TDG levels in the 148%-152% range were observed, dropping to about 130% when measured 1,000 feet downstream; with deflectors, the near-field levels were in the 130% range. Ahmann added that the Corps has observed near-field TDG levels higher than 160% under some flow and spill conditions near undeflected bays; the concern is that the adult fishway entrances are located near the end bays, and if the two end bays at Ice Harbor are not equipped with deflectors, those are the levels adult migrants could be encountering during some years, causing potential delay. And without the training wall extension, he added, the eddy we've seen at Ice Harbor will only exacerbate those gas conditions.

Ahmann said the Corps is planning further near-field TDG testing on March 6-10 at Ice Harbor, running very high spill levels to provide further performance information on the eight flow deflectors currently installed at the project. Other objectives of the test include the generation of better performance estimates if 10 deflectors were installed, and to evaluate the day and night spill patterns at Ice Harbor. Preliminary data from the test should be available in time for presentation at the March 19 SCT meeting.

In response to a question, Emmert said the Corps hopes to complete the detailed design for the training wall extension and coffer cells and get construction contracts ready to go by March 31. The contracts will be advertised in April, and awarded by May 15. Materials procurement will require 90 days, from June 1- August 30. By April 30, we will open bids, and will know what the true cost is at that point, Emmert added. A decision on whether or not to go forward with this project will need to be made immediately after that if the contract is to be awarded on schedule; construction would need to begin September 1.

In response to a question, Anderson said that, in order to meet this schedule, some FY'98 funds -- about \$600,000 -- will be required. It's not currently in the nudget, which means we'll have to find it somewhere, he said.

The reason the letter from NMFS was written, said Rainey, has to do with the fact that the end-bay flow deflectors and the training wall extension will not be installed in 1998. The question is, do we go ahead and, based on what we've seen in the model, and what we know about the hydraulics at that project, press on with improvements that are going to help fish? We don't fault any of the steps that were taken, he said -- all we're saying is that we would prefer to see some sort of an evaluation that will allow the award to proceed after we've looked at the adult passage ramifications of operating in 1998 with eight deflectors at Ice Harbor, with no training wall extension -- that will give us a much better understanding of the magnitude of the problem, as well as the magnitude of the expected benefit of going ahead with these projects. We're just trying to suggest that we can make a more informed decision by waiting a bit, Rainey said.

In response to a question, Anderson said that it is the Corps' intention to move forward



with at least the coffer cell work under the above-outlined schedule -- that's a commitment we've made to the navigation industry, because the negative impacts on barge traffic have clearly been caused by the flow deflectors, he said, and I don't want anyone to be surprised by that. If the collective input from the SCT is, don't move forward on the end bays and training wall, I don't think anyone at the Corps will fall on their sword. But we believe the coffer cell work, at least, has to move forward.

Another issue identified by the group was whether the navigation fix should be paid for using fish mitigation funds or Corps Construction General funds; none of the SCT participants, outside the Corps, supported the use of CRFM funds for this work. I think we should probably elevate this issue immediately, said Ruff – there is a strong difference of opinion among the SCT at this point.

The group spent a few minutes discussing whether or not to go forward with this work in 1998; ultimately, Hevlin polled the participating agencies for their position. The voting broke down as follows:

**Delay contract award on the end bays and training wall extension until further information is available:**

NMFS  
BPA  
ODFW  
NPPC

**Go forward with end-bay flow deflectors, training wall extension and coffer cell construction under the schedule laid out by Emmert, above:**

COE  
IDFG  
WDFW

David Arthaud said the Shoshone-Bannock Tribes do not support coffer cell construction, or any other capital improvement projects on the Lower Snake dams, prior to the 1999 decision; he said the tribes would like an opportunity to study the end-bay flow deflectors and training wall extension further before deciding to support or oppose these items.

Ultimately, it was decided to table the decision on whether to go forward with the end bay flow deflectors and training wall extension contracts until further discussions between NMFS, the Corps and the fish managers can occur, with a final decision to be made at the March 19 SCT meeting. It was agreed that the SCT will prepare an issue paper for the IT on the coffer cell funding issue; it was further agreed that the SCT membership will have an opportunity to review and comment on the issue paper before it is submitted to IT.

In response to a request from Boyce, Rainey briefly outlined the contents of a recent memo from NMFS to the Dissolved Gas Abatement team on the subject of end-bay flow

deflector construction at Bonneville Dam. He said it is his hope that this memo, which advocates fast-track construction for the end-bay deflectors at Bonneville, will lead to a joint FFDRWG/DGAS meeting in the next few weeks; after that, if that group feels the concept has merit, we can bring it to SCT, for a discussion very similar to the one we just had, he said. Sounds good, said Ruff.

#### **VIII. Council/ISAB Review of Corps' Mainstem Capital Construction Program – Progress Report.**

Ruff distributed copies of the just-released letter from ISAB chair Richard Williams to John Etchart, Power Planning Council chair, on the Congressionally-mandated review of the Corps' CRFM program (this letter is attached as Enclosure I). Basically, what this letter says is that the ISAB cannot complete this review by the June 30 deadline, and they want to take a phased approach, said Ruff. Contrary to what you may have heard on the street, he said, the entire review will be done, but it will be done in phases. The first phase of the review, under the ISAB's proposed approach, would include:

- 1. The role of mainstem fish bypass measures in an ecosystem approach for the Columbia/Snake Rivers
- 2. A review of the scientific basis for future investments in extended-length bar screens at John Day Dam
- 3. A review of the scientific basis for the new outfall placement and fish passage improvements at John Day Dam.

The first phase of the review would be completed by May 19-20, 1998, Ruff said. The second phase of the review would include completion of a scientific review of the Corps' Dissolved Gas Abatement Program by August 1998; the third phase, to be completed by January 1999, would include:

- 1. Surface bypass systems, especially the prototype system at Lower Granite Dam
- 2. Adult fish passage improvement projects
- 3. An integration of the major fish mitigation capital construction strategies in the context of the overall CRFM program.

One issue, said Anderson – with the possible exception of the tribes, which did not attend the meeting, we all agreed to put \$5 million in the FY'99 CRFM budget as a placeholder for further testing of the Lower Granite surface collector prototype. If we have to wait until the ISAB completes its review in January 1999, it will be too late to get funding for that work in 1999. Perhaps there is a way to accelerate at least that portion of the work, Anderson said, because really, we need to make a go/no go decision on the FY'99 test by August 1998. After some minutes of discussion, Ruff said he would talk to Mike Schiewe about the possibility of accelerating the ISAB's review of the Lower Granite portion of the surface collection review.

#### **IX. SCT Criteria for Prioritizing CRFM Program Items – Final Weightings.**

Hevlin distributed Enclosure J, a packet of information on the SCT's prioritization

criteria and how the weightings of those criteria by the SCT membership fell out. He said he has yet to receive BPA's weightings; except for that, the weightings are complete. He requested a few modifications of the weightings submitted by Ruff and Anderson; it was agreed that these modifications, as well as any additional comments from other SCT members, will be submitted to Hevlin by February 25.

#### **X. FY'99 CRFM Budget and Schedule.**

Anderson said that, to date, he has received no comments on the FY'99 planning schedule distributed at the last SCT meeting. That being the case, he said, the next step is for the districts to submit their revised FY'99 work plans to division by March 2. My hope is that I can then distribute those work plans prior to the next SCT meeting, Anderson said. We can then start folding those work plans into our discussion of FY'99 priorities. I think everyone knows by now that the President's FY'99 CRFM budget was \$117 million, Hevlin added; at the next SCT meeting, we can begin to sink our teeth into the specifics contained in the work plans.

#### **XI. Proposed Adult Fall Chinook Telemetry Study.**

COE's Bob Willis said Ron Boyce had raised some specific questions about this proposed study; Willis said he would contact Boyce directly to see if he can resolve Boyce's concerns.

#### **XII. AFEP and FFDRWG Updates.**

Mike Mason distributed Enclosure K, a brief outline of items discussed at the January 15 FFDRWG meeting. Hevlin suggested that, in the future, the AFEP/FFDRWG update lead off the SCT meeting agenda. It was agreed to give this a try at future meetings.

#### **XIII. Next System Configuration Team Meeting Date and Agenda Items.**

The next meeting of the SCT was set for Thursday, March 19, beginning at 9 a.m. at NMFS' Portland offices. With that, the meeting was adjourned. Meeting notes prepared by Jeff Kuechle, BPA contractor.